



## Model MX400 Series Microphones Specification Sheet

### MODEL MX400 SERIES MICROPHONES



### OVERVIEW

Shure Microflex® MX400 Series microphones are miniature gooseneck-mounted electret condenser microphones designed primarily for speech and vocal pickup. They can be mounted on lecterns, pulpits, or conference tables. All models include a preamplifier and are available with interchangeable cardioid, supercardioid, or omnidirectional cartridges.

### FEATURES

- Wide dynamic range and frequency response for accurate sound reproduction across the audio spectrum
- Interchangeable cartridges provide the right polar pattern for every application
- Balanced, transformerless output for increased immunity to noise over long cable runs
- Shock mount that provides over 20 dB isolation from surface vibration noise
- Locking flange mount for permanently securing microphone to lecterns, pulpits, or conference tables
- Snap-fit foam windscreen

### MODEL VARIATIONS

- **MX412:** 305 mm (12 in.) gooseneck microphone.
- **MX418:** 457 mm (18 in.) gooseneck microphone.
- **MX412S:** 305 mm (12 in) gooseneck microphone; includes a mute switch and an LED.
- **MX418S:** 457 mm (18 in) gooseneck microphone; includes a mute switch and an LED.

### SPECIFICATIONS

**Frequency Response** (Figure 1)  
50 to 17,000 Hz

**Polar Pattern** (Figure 2)

**Output Impedance (at 1000 Hz)**  
Rated at 150  $\Omega$  (180  $\Omega$  actual)

**Open Circuit Sensitivity (at 1 kHz, ref. 1 V/Pascal\*)**

Cardioid: -35.0 dB (17.8 mV)

Supercardioid: -33.5 dB (21.1 mV)

Omnidirectional: -27.5 dB (42.2 mV)

All settings -12 dB at 0 gain

\*1 Pascal = 94 dB SPL

**Maximum SPL (1 kHz at 1% THD, 1 k $\Omega$  load)**

Cardioid: 124.2 dB

Supercardioid: 122.7 dB

Omnidirectional: 116.7 dB

All settings +6 dB at 0 gain

**Equivalent Output Noise (A-weighted)**

Cardioid: 28.0 dB SPL

Supercardioid: 26.5 dB SPL

Omnidirectional: 20.5 dB SPL

**Signal to Noise Ratio (referenced at 94 dB SPL)**

Cardioid: 66.0 dB

Supercardioid: 67.5 dB

Omnidirectional: 73.5 dB

**Dynamic Range at 1 k $\Omega$  Load**

96.2 dB

100 dB at 0 gain

**Common Mode Rejection**

45.0 dB minimum

**Mute Switch Attenuation (switched models only)**

50.0 dB minimum

**Preamplifier Output Clipping Level (1% THD)**

-6.0 dBV (0.5 V)

-12 dB at 0 gain

**Polarity**

Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output connector.

**Power Requirements**

11 to 52 Vdc phantom, 2.0 mA

**Environmental Requirements**

Operating Temperature Range: -18° C to 57° C (0° F to 135° F)

Relative Humidity: 0 to 95%

**Dimensions** (Figure 3)

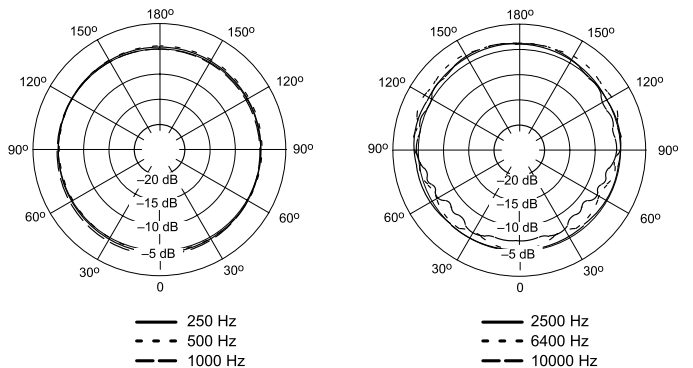
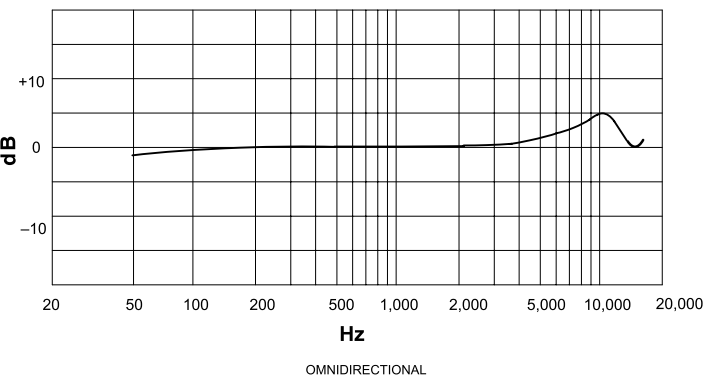
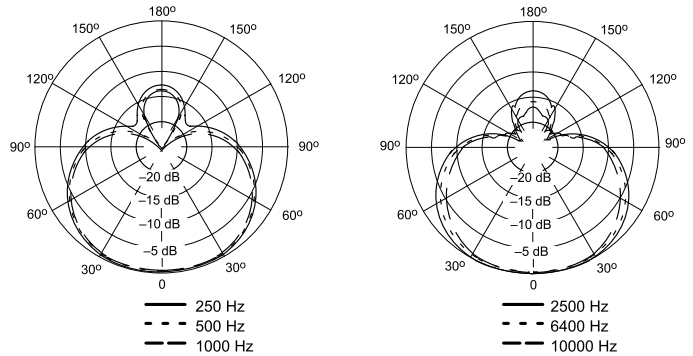
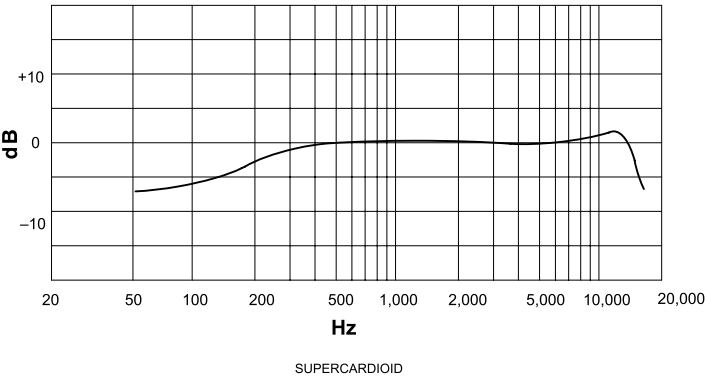
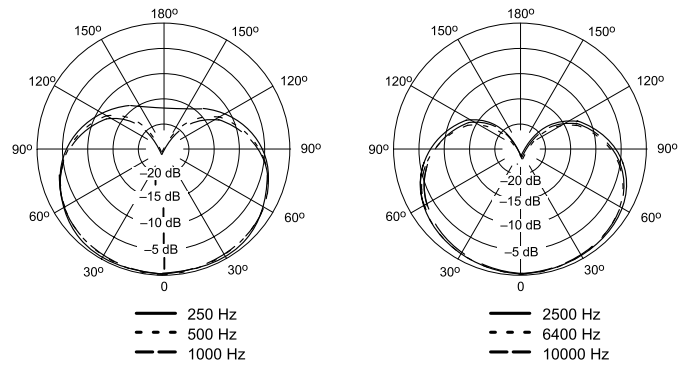
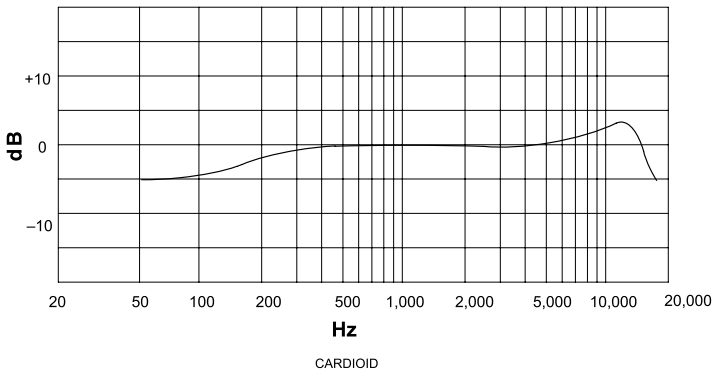
**Certification**

Eligible to bear CE Marking. Conforms to European EMC Directive 89/336/EEC. Meets applicable tests and performance criteria in European Standard EN55103 (1996) parts 1 and 2, for residential (E1) and light industrial (E2) environments.

**REPLACEMENT PARTS**

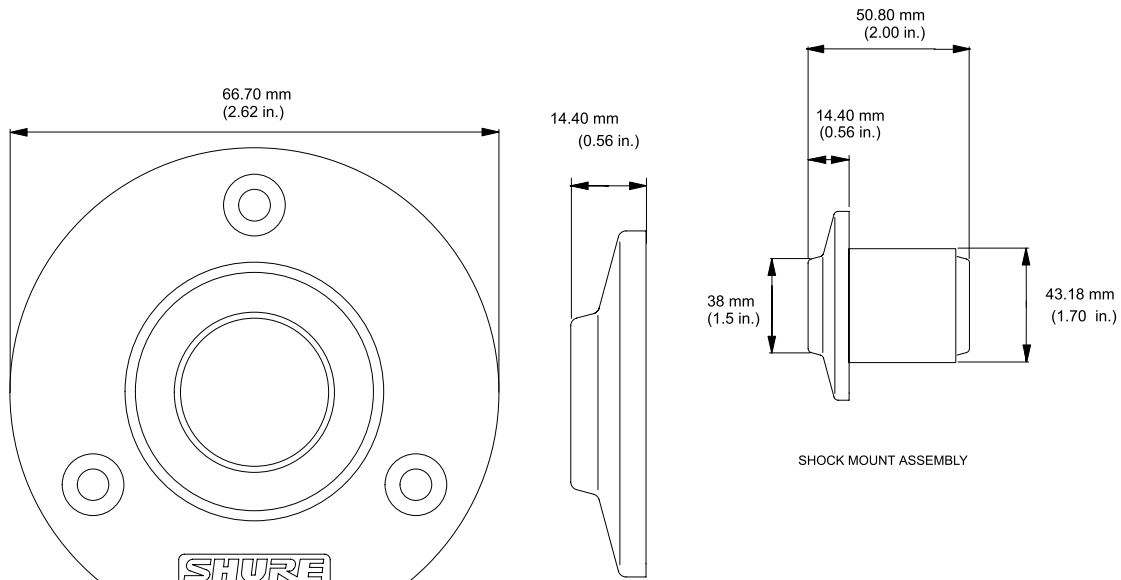
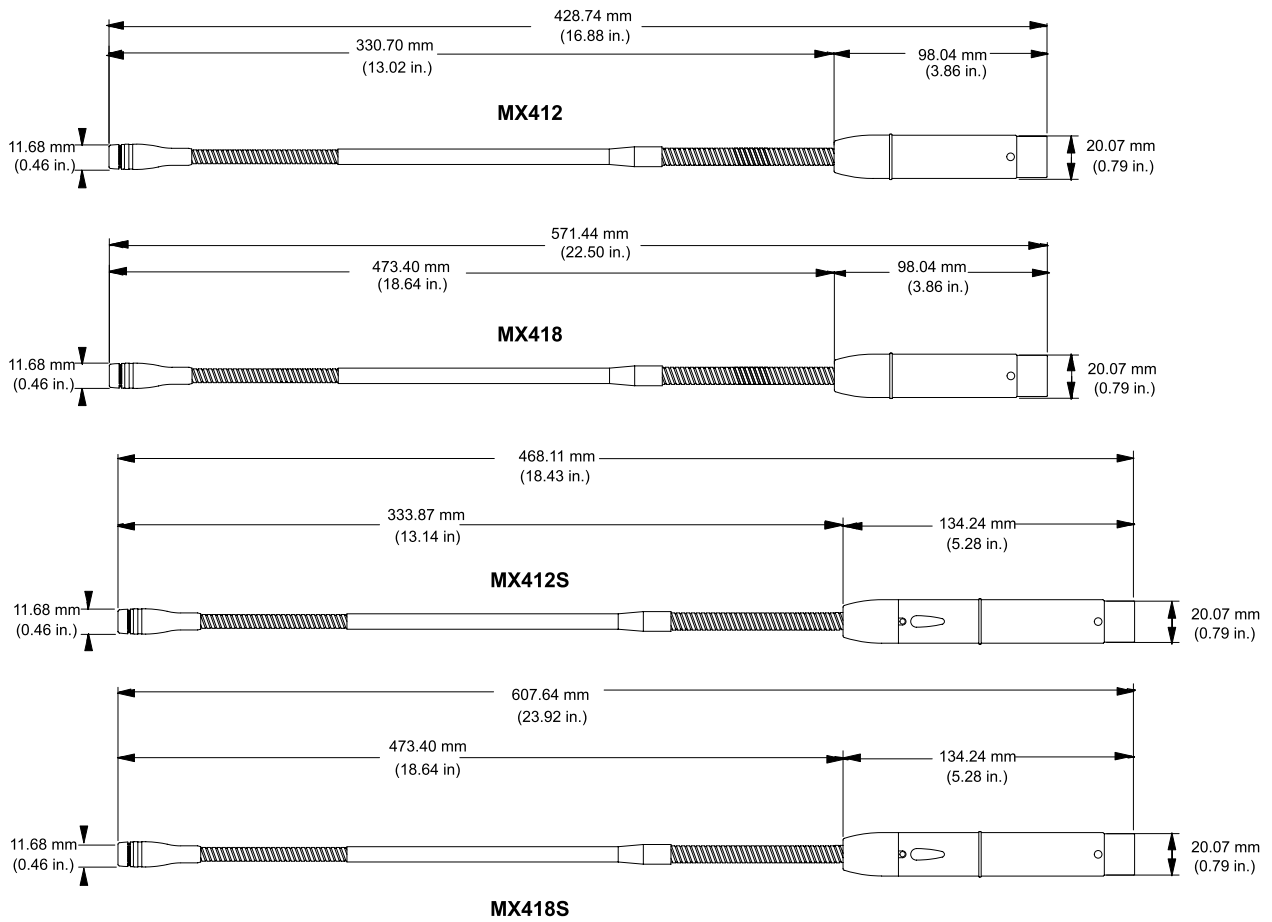
Foam Ball Windscreen A99WS  
 Locking Metal Windscreen A412MWS

Portable Desktop Base A412B  
 Stand Adapter A57E  
 Omnidirectional Cartridge R183B  
 Supercardioid Cartridge R184B  
 Cardioid Cartridge R185B  
 Snap-fit Foam Windscreen (4) RK412WS  
 Shock Mount A400SM



TYPICAL FREQUENCY RESPONSE  
**Figure 1**

OMNIDIRECTIONAL  
 TYPICAL POLAR PATTERNS  
**Figure 2**



(Actual Size)

MOUNTING FLANGE

SHOCK MOUNT ASSEMBLY

**DIMENSIONS**

**Figure 3**